

MECHANICAL ENGINEERING PROGRAM
ABET COURSE SYLLABUS

ME 129 Introduction to Mechanical Engineering II (1 Units) Required

- Course Descriptions:** (2013-15 Catalog) Communication of designs to manufacturing using basic definitions of points, lines and planes in space. Pictorials, orthographic projection, section views, and auxiliary views. Techniques from geometry, and spatial definitions integrated to provide information to both the design and manufacturing processes. Includes continuation of cornerstone service learning design project. 1 laboratory. Formerly ME 151.
- Prerequisite Courses:** ME 128, ME 163 concurrent
- Prerequisites by Topic:** None
- Textbook:** (and/or other required material) Technical Graphics Communication, 4th Edition, Bertoline
ME 129 - Engineering Design Communication Workbook
Engineering Drafting Toolkit
- References:** Any specified by Instructor
- Course Coordinator:** John Larson, ME Lecturer
- Course Learning Outcomes:**
1. Understand the fundamentals of the graphical methods used to convey engineering concepts.
 2. Ability to create, read, and interpret engineering drawings.
 3. Identify and analyze the relationships of geometrically defined entities.
 4. Demonstrate the use of terminology and symbols used in engineering communications.
 5. Ability to relate design concepts to fabricators using standard graphic communication conventions.
 6. Fundamental use of the engineering design process to make decisions related to design and fabrication.

Relationship of Course to MECHANICAL ENGINEERING Program Outcomes:												
<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>
M	L	M	L	M	L	M	M	L	L	M	L	L

Topics Covered:

1. Lettering, Scales, Orthographic Sketching
2. Orthographic Projection, Line Conventions
3. Fillets & Rounds; Hole, Counter bore & Countersink Conventions
4. Pictorial Views & Cornerstone Project
5. Sectional Views
6. Auxiliary Views
7. Descriptive Geometry: True length - auxiliary view and rotation
8. Descriptive Geometry: True shape - auxiliary view and rotation
9. Descriptive Geometry: Intersections & Dihedral Angle

Laboratory Activities:

Assignments and projects that require students to directly apply the laboratory topics. Instructor gives group and individual assistance as needed.

Class/Lab Schedule:

One 170 minute lab per week

Contribution of Course to Meeting the Professional Component:

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| (a) College-level math & basic sciences: | 0 credits |
| (b) Engineering Topics:
Design - Yes | 1 credits |
| (c) General Education: | 0 credits |
| (d) Other | 0 credits |

Prepared by: John Larson

Date: 11/1/13
